



Case HF/1-22603

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE PCT NATIONAL STAGE APPLICATION OF  
PETR KVITA ET AL  
INTERNATIONAL APPLICATION NO. PCT/EP 02/14785  
FILED: DECEMBER 22, 2002  
FOR: PARTICULATE COMPOSITION  
COMPRISING DYE FIXATIVES  
U.S. APPLICATION NO: 10/500,778  
35 USC 371 DATE: JULY 1, 2004

Group Art Unit 1751  
Examiner: A.S. Khan

DECLARATION UNDER RULE 132

I, EMMANUEL MARTIN, a citizen of France, residing at 3, rue des Sorbiers, 68220 Folgensbourg, hereby declare:

That I was awarded the degree of Ingenieur in Chemistry of the ENSI-Caen University (F), France, in 1997;

That I have been employed by Ciba Specialty Chemicals, Grenzach, as a chemist since 1999 and presently hold the position of an Application Laboratory Head in the Segment Plastic Additives;

That I have been engaged in the field of Home & Fabric Care for Ciba Specialty Chemicals since 1999;

That based on the above education and experience, I consider myself an expert in the field of Fabric Care (detergents and rinse conditioners).

I, EMMANUEL MARTIN, declare that the preparation of the dye fixative material (A) and (B) as indicated in Part I of this Declaration as well as the following determination of dye transfer inhibition indicated in Part II of this Declaration were carried out under my direction and supervision;

That I am submitting herewith the following exact report of the preparations and tests mentioned below.

I, EMMANUEL MARTIN, declare that the following tests were carried out under my direction and supervision. That I am submitting herewith the following exact report of the dyeings and the results obtained.

## Part I

### Dye fixative material

Dye fixative material (A) was prepared according to the prescription given in U.S. Patent No. 6,156,722, column 5, lines 9 to 13, as a polymer prepared from the following monomers:

Ethylene diamine + Dicyanamide + Formaldehyde

Dye fixative material (B) was prepared according to the prescription given in the instant patent application No. 10/500,778 in the Examples as TINOFIX® CL which is a polymer from the following monomers:

Diethylene triamine + dicyandiamide

I, EMMANUEL MARTIN, declare that the above dye fixative materials (A) and (B) exhibited the same relative purity.

## Part II

### I) Determination of dye transfer inhibition

The following washing composition was prepared given in % w/w:

Sodium lauryl ethoxy sulphate	5%
Coconut Fatty Acid C <sub>12</sub> -C <sub>18</sub>	9%
Alcoholethoxylate C <sub>14</sub> -C <sub>15</sub> EO 7-8	20%
Monoethanolamine	4%
1,2-Propylene glycol	2%
Iso-propanol	10%
Citric Acid (aqueous solution)	4%
KOH (aqueous solution)	1.5%
Dye fixative	X%
and deionised water to balance	100%

### II) Comparison of Dye transfer Inhibition of both polymers according to the following washing conditions:

- 30 g of the liquid washing composition given above is used (the amount of the dye fixative material used is given in the Table 1, below)
- Liquor ration of water : fabric is 5:1
- Temperature used is 60°C
- Duration of washing process is 20 minutes
- A piece of cotton (2g) dyed with 1% Direct Blue 78 together with a piece of white bleached cotton (18g) is used

Different amounts of the dye fixative material (A) and (B) have to be used because the active substance of the dye fixative material obtained is different:

(A) = 49% and (B) = 33%.

Washing takes place in a Linitest laboratory washing machine. The fabrics are then rinsed for 30 seconds under running tap water, spun and dried. The lightness of each fabric compared with the starting material was determined.

III) Measurement on the textile material

The dye transfer inhibition effect on the white bleached cotton (acceptor) is expressed in lightness Y. The higher the lightness value, the better the dye transfer inhibition effect.

Results

Table 1

Dye fixative polymer	Amount of dye fixative polymer X in %	Lightness Y of the acceptor before washing	Lightness Y of the acceptor after 1 washing cycle
Without polymer	0	93	59
Dye fixative (A)	1	93	80
Dye fixative (B)	1.5	93	90

As evident from the Table 1, the dye fixative material (B), supra, is superior to the structural closest dye fixative material of the prior art as given in Part I with regard to lightness value. The known dye fixative material (A) does not reach the effect obtainable with dye fixative material (B). Thus the lightness value of the dye fixative material (B) is distinct superior to the lightness value of the dye fixative material (A).

Part III

I, EMMANUEL MARTIN, hereby declare:

1. That based on my education and experience, I consider myself an expert in the field of Fabric Care;
2. That the results of the above tests show that the dye fixative material (B) is superior to the closest structural dye fixative material (A) with respect to the property tested;
3. That lightness is an important feature for the industry and an improvement in this property is of considerable importance;
4. That the above given measurement of lightness demonstrates a significant improvement in this property which is of commercial importance;
5. That the improvement attainable with respect to lightness could not be foreseen and the results of the tests are surprising to me and I would never have predicted such difference in the property tested.

I, EMMANUEL MARTIN, declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 9th day of March 2007



EMMANUEL MARTIN